

**Subject: SOFTWARE ENGINEERING**

**Time: 3 Hours**

**Max. Marks: 100**

**DECEMBER 2010**

**NOTE: There are 9 Questions in all.**

- **Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.**
  - **The answer sheet for the Q.1 will be collected by the invigilator after half an hour of the commencement of the examination.**
  - **Out of the remaining EIGHT Questions answer any FIVE Questions. Each question carries 10 marks.**
  - **Any required data not explicitly given, may be suitably assumed and stated.**
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**Q.1 Choose the correct or the best alternative in the following: (2×10)**

a. Which is not a software characteristics?

- (A) Software does not wear out      (B) software is flexible  
(C) Software is not manufactured      (D) software is always correct

b. Product is-

- (A) Deliverables  
(B) User expectations  
(C) Organisation's effort in development  
(D) None of the above

c. Which is not a product metric?

- (A) size      (B) reliability  
(C) productivity      (D) functionality

d. Which is not a process metric?

- (A) productivity      (B) functionality  
(C) quality      (D) efficiency

e. Effort is measured in terms of:

- (A) person-months (PM)      (B) rupees (Rs)  
(C) persons (P)      (D) months (M)

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f. An independently deliverable piece of a functionality providing access to its services through interfaces is called

- (A) software measurement                      (B) software composition  
(C) software measure                            (D) software component

g. Management of software development is dependent on

- (A) people    (B) product  
(C) process    (D) all of the above

h. Software consists of

- (A) Set of instructions +operating system  
(B) Programs +documentation +operating procedure  
(C) Programs + hardware manual  
(D) Set of programs

i. During software development, which factor is most crucial?

- (A) people    (B) product  
(C) process    (D) project

j. Program is

- (A) subset of software                              (B) superset of software  
(C) software    (D) none of the above

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**Answer any FIVE Questions out of EIGHT Questions.  
Each question carries 16 marks.**

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- Q.2** a. Explain the UI Design principles in detail. (8)  
b. Discuss the difference between cohesion & coupling. (8)
- Q.3** a. Explain various Risk Management activities. (8)  
b. What are the various activities during Software Project Planning? (8)
- Q.4** a. A university wishes to develop a software system for Library Management activities. Design the problem statement for the software company. (8)

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- b. Write about crucial process steps of Requirement Engineering. (8)
- Q.5** a. Explain the textual & graphical information presentation. (8)
- b. What is unit testing? Explain the structural testing in detail? (8)
- Q.6** a. Explain the software prototype model. List the benefits of developing a prototype early in the software process. (8)
- b. List various Software Quality Attributes along with their purpose. (8)
- Q.7** a. What is the objective of designing a software? Why Design is so important?(8)
- b. Explain Modular Decomposition Style and Write various properties of a Modular System. (8)
- Q.8** a. What is Software Testing? Differentiate between white box testing and black box testing. (8)
- b. Justify the statement “Existing program components can be reused”. What are various steps of the Reuse Model? (8)
- Q.9** a. Differentiate Verification and Validation & Explain their importance in Software Development. (8)
- b. Define Software Metrics. Explain its area of application. (8)